

REMARKS

Applicant respectfully submits that the present invention is distinguishable over each of the prior art references cited by the Examiner, and in support presents the following arguments.

In commenting upon the references and in order to facilitate a better understanding of the differences that are expressed in the claims, certain details of distinction between the references and the present invention have been mentioned, even though such differences do not appear in all of the claims. It is not intended by mentioning any such unclaimed distinctions to create any implied limitations in the claims. Not all of the distinctions between the prior art and Applicant's present invention have been made by Applicant. For the foregoing reasons, and without prejudice, Applicant reserves the right to submit additional evidence showing the distinctions between Applicant's invention to be non-obvious in view of the prior art.

The remarks herein are intended to assist the Examiner in re-examining the application and in the course of explanation may employ shortened or more specific or variant descriptions of some of the claim language. Such descriptions are not intended to limit the scope of the claims; the actual claim language should be considered in each case. Furthermore, the remarks are not to be considered to be exhaustive of the facets of the invention that render it patentable, being only examples of certain advantageous features and differences that Applicant's attorney chooses to mention at this time.

Response to 35 U.S.C. § 102 Rejection

Sturwold fails to teach a transesterified fatty acid ester

Applicant respectfully submits that the amended independent claim 2 contains elements not found in Sturwold (US 4,067,817) ("Sturwold"). Current claim 2 incorporates, among other limitations, the limitation of previous claim 9. As noted generally by the Examiner on page 4, paragraph 2 of the office action dated 2/22/06, the prior art (Sturwold) fails to teach the use of propanol in the transesterification of castor oil. As such, Sturwold fails to teach at least one element of the current independent claim 2, namely, reaction with propyl alcohol. Additionally, Sturwold fails to teach a reaction product that is a composition substantially soluble in organic solvents as required by claim 2. In contrast, Sturwold teaches a composition that "can be used either in neat form or in solution and are readily compatible with water." See Sturwold, Abstract. Sturwold argues one point of novelty of the composition is that "the treatment of aluminum and aluminum alloys it is totally unexpected that these lubricants can be applied to the metal in an aqueous medium without the development of water stains on the surface of the metal." Sturwold, Col.5, ll. 48-52. Sturwold discusses an aqueous lubricant composition containing a major proportion of water. Sturwold, Claims 8-10. Sturwold's use of polyethylene glycol diols appreciably promotes water solubility and is central to Sturwold's teachings. The composition of Sturwold clearly differs from the composition of the instant invention as the instant invention is not readily miscible with water but is soluble in organic solvents. Sturwold's stated goal is to provide miscibility in water. This teaches away from the current invention and further reflects the difference in composition.

The current invention has a particular object to provide a refrigeration oil lubricant that is compatible with naphthenes, paraffins, alkyl benzenes, mineral oil, polyol esters, polyalphaolefins, polyalkylene glycols, polybutenes and polyvinyl ethers. Application, page 3. The composition of the claim 2 is thus different from Sturwold as claim 2 of the current invention required the element that the reaction products being substantially soluble in organic solvents. Therefore, Sturwold is missing at least two elements present in Claim 2.

Claims 4-5, 11,13, 19-24, 32-33, and 37 depend from claim 2 and therefore incorporate the same limitations as the independent claim 2 and are patentably distinct. The patentable distinctions previously provided also continue to apply.

In summary, Sturwold teaches away from the elements of claim 2 as it focuses on water solubility. Sturwold is also missing entirely the reactant propyl alcohol. The Sturwold and the current invention differ in both reactants and products. Therefore, Applicant respectfully submits that Sturwold does not anticipate claim 2.

Claim 38 is distinguished from Sturwold because claim 38, as clarified through amendment, is also restricted to the use of propyl alcohol, a limitation that is not present in Sturwold. The reactants of claim 38 result in, and are therefore limited to, a composition that is substantially soluble in organic solvents. As noted above, both of these elements are missing from Sturwold. Sturwold does not teach the use of propyl alcohol and Sturwold creates a composition that is water soluble, in contrast to the limitations of Claim 38.

Claims 40, 44, and 46-47 depend from claim 38 and are distinguishable for the same reasons.

Claim 114 includes the same limitations as noted for claim 2 and 38, namely, the limitation of a propyl alcohol reactant and the limitation of the phosphorus-containing composition created in the reaction being substantially soluble in organic solvents

Therefore, Sturwold does not teach all of the elements of claim 114. Claim 114 is believed to be distinguishable from Sturwold on this and other bases.

Response to 35 U.S.C. § 103 Rejection

Applicant respectfully submits that claims 9, 12, 25, 34-36 and 48 are not made obvious over Sturwold in view of either Haller or Klein.

1. No Motivation to Combine. An obviousness rejection must articulate the motivation, suggestion or teaching that would have led the skilled artisan at the time of the invention to combine prior art elements to make the claimed invention, the U.S. Court of Appeals for the Federal Circuit ruled March 22 (In re Kahn, Fed. Cir., No. 04-1616, 3/22/06).

Applicant respectfully submits that the motivation to combine Sturwold with either Haller or Klein is not articulated, therefore a prima facie showing of obviousness has not been made. The exact nature of the proposed combination has also not been made clear as there are no details regarding whether, for example, the Examiner is proposing that components of Haller are being substituted for components of Sturwold or whether the components of Haller are being added to the components of Sturwold. In either case, there would be no motivation to combine. Sturwold teaches a water-miscible lubricant using specific reactants, including polyoxyalkylene glycol and aliphatic or cycloaliphatic hydrocarbon dicarboxylic acid containing 18 to 54 carbon atoms. The effect of polyoxyalkylene glycol is to create water miscibility. The aliphatic hydrocarbon dicarboxylic acid also promotes detergency and affects water miscibility such that solubilization

is promoted, acting as a surfactant providing a water miscible interface for the hydrocarbon (castor oil). Neither of these reactants is present in the instant invention nor is the current invention directed toward a water-miscible lubricant but, instead, is directed to a product that is not miscible in water. Applicant respectfully believes that one of ordinary skill in the art would not remove two of the three reactant of the Sturwold teaching to replace these with entirely different reactants that create a product that, unlike Sturwold, is substantially miscible in organic solvents. This is disparate art. Similarly, if the Examiner is suggesting that applicant's reactants should be added to Sturwold, there would be competing forces resulting a product that may not be substantially miscible in either phase. There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the water-miscible Sturwold reference or to combine Sturwold teachings with Haller or Klein.

Applicant respectfully submits that claims 9, 12, 25, 34-36, and 48 are distinguishable even if Sturwold could be combined with Haller or Klein.

2. Sturwold in view of Haller. Haller teaches the alcoholysis of ricinus oil in the presence of hydrochloric acid creating a product that is expected to be largely water immiscible. Sturwold teaches the reaction of castor oil with polyoxyalkylene glycol and aliphatic hydrocarbon dicarboxylic acid to create a water miscible product, this miscibility being a goal of the teachings. Although Haller and Sturwold each include a form of castor oil, the teachings are disparate art in that the products are entirely different in composition, physical characteristics and behavior. Claim 2 and 38, from which the other claims depend, require a transesterification with propyl alcohol and with a phosphorous-containing acid to create a product that is substantially soluble in organic solvent. Sturwold, as discussed above, is missing the element of

propyl alcohol and also does not teach a composition that is soluble in organic solvents. It is not clear how the two teachings of Sturwold and Haller (water immiscible process), could be combined to meet the teachings of current invention as expressed in claims 9, 12, 25, 34-36 and 48. In addition to a lack of suggestion or motivation for combination, there is no reasonable expectation of success. As noted generally above, it is not clear if the Examiner is suggesting that the n-propanol of Haller be added to the Sturwold disclosure or whether it would be substituted for the polyoxyalkylene glycol and/or the aliphatic hydrocarbon dicarboxylic acid and/or some other element of Sturwold. In either case, there is no suggestion or motivation for this modification. In fact, Sturwold teaches against the introduction of n-propanol in either situation as the goal of Sturwold is to create water miscibility. Removing polyoxyalkylene glycol would reduce water miscibility in direct contravention of the Sturwold teaching. Removing both polyoxyalkylene glycol and aliphatic hydrocarbon dicarboxylic acid from Sturwold would preclude all water miscibility, contrary to the teachings of Sturwold. Therefore, Sturwold teaches away from the use of n-propanol of Haller. Applicant respectfully submits that Sturwold in view of Haller does not make the current invention obvious.

3. Sturwold in view of Klein. Regarding Sturwold in view of Klein, it is similarly unclear how elements of Klein could be substituted into Sturwold. Even if there were a suggestion or motivation to combine Sturwold with Klein, several elements would still be missing. Sturwold teaches a water miscible product as opposed to the current claims that require a composition that is substantially soluble in organic solvent. Klein teaches a process that is disparate art and results in a product that is not water miscible, such that Sturwold teaches away from Klein. Klein teaches a reaction of two compounds, namely, castor oil and an acidic catalyst such as phosphoric acid. Klein then discusses mixing, not reacting, the resulting Klein

product with any of a laundry list of components. Klein's resulting product is not a transesterified fatty acid ester but a mixture of the dehydrated castor oil taught in Klein with any number of other components. Klein solely describes a process of dehydration of castor oil under conditions optimized to prevent polymerization. Applicant notes that no transesterification with exogenous alcohols is possible because alcohols are never added for reaction. This physical mixture of alcohol and dehydrated castor oil is completely different from the transesterified fatty acid ester resulting from and required by the claims of the current invention.

Sturwold is an entirely different teaching resulting in a water soluble product. Together, even if there were motivation to combine, they would not form the water immiscible transesterified fatty acid of the current invention with the required limitation of the use of propyl alcohol and substantial solubility in organic solvent.

While Klein gives brief reference to mixing an alcohol with the product resulting from the initial reaction, there is no indication that a reaction takes place. As described above, Applicant believes that no reaction would take place upon mixing an alkanol with the dehydrated castor oil of Klein. The specification of Klein clearly teaches mixing and not reacting as the various components listed for mixing act as carriers, not reactants. One of ordinary skill in the art would not combine the teachings of Klein with the teachings of Sturwold as they are disparate art with Sturwold's goal of water miscibility teaching away from Klein.

There is nothing explicit in Klein that would suggest modification, there is also nothing implicit suggesting combining the reference with other unrelated chemical processes (i.e. transesterification). The Klein teachings, knowledge of one of ordinary skill in the art, and nature of the problem to be solved, as a whole, would not suggest doing so to those of ordinary

skill in the art, as is required in MPEP 2143.01 and *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). Not only is there no suggestion as to the desirability of the combination, discussed above, but also the combination would not in fact be desirable, as the teachings of Klein relate to reducing the KOH which teaches away from transesterification, as discussed in relation to Sturwold and below in relation to Klein.

The combination of Sturwold with Klein is missing at least one of the required elements of independent claims 2, 38 and 114 as well as all claims depending therefrom.

4. Graham v. John Deere Company. As shown in the declaration of Fred Massey submitted herewith, there was a recognized need in the industry as noted by the repeat failures of prior art lubricants at high pressures. To address this problem, the industry has historically and continues today to attempt to use halogenated or sulfonated compounds to obtain better extreme pressure benefits, but use of these compounds often exhibits severe corrosive reactions within mechanical systems. This shortcoming of the prior art is overcome in the current invention.

The current invention was developed specifically to address the long felt need. As noted in the declaration, the composition of the invention has been the focus of significant market success even though they have only been marketed for short time. This demonstrates clear recognition by the industry that the composition of the current invention addresses a long felt need that others have failed to address. See *Graham v. John Deere Company*, 383 U.S. 1, 17-18 (1966).

Furthermore, the transesterified fatty acid of the invention of claim 2, 38, 114 and dependent claims shows surprising results, when compared to castor oil. The declaration of Fred Massey, previously filed, indicate results of testing showing the Falex failure load for several

embodiments of the current invention and that of castor oil. As can be seen, the transesterified fatty acid ester of the invention is remarkably superior to castor oil with failure loads being triple that of castor oil. The claims depending from the independent claims are also distinguishable on the same bases.

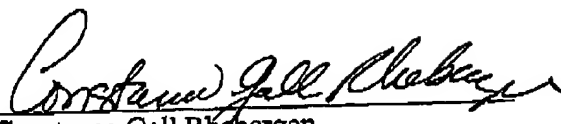
In commenting upon the references and in order to facilitate a better understanding of the differences that are expressed in the claims, certain details of distinction between the references and the present invention have been mentioned, even though such differences do not appear in all of the claims. It is not intended by mentioning any such unclaimed distinctions to create any implied limitations in the claims. Not all of the distinctions between the prior art and Applicant's present invention have been made by Applicant. For the foregoing reasons, Applicant reserves the right to submit additional evidence showing the distinctions between Applicant's invention to be unobvious in view of the prior art.

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Reconsideration of the application and allowance of all of the claims are respectfully requested. In view of the foregoing Response, Applicant respectfully submits that all of the claims are allowable, and Applicant respectfully requests the issuance of a Notice of Allowance.

Should further discussion regarding the application be desired by the Examiner, a telephone conference is respectfully requested. I can be reached at (713) 221-3306.

Respectfully submitted,


Constance Gall Rhebergen
Reg. No. 41,267

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BRACEWELL & GIULIANI LLP
P.O. Box 61389
Houston, Texas 77208-1389
(713) 221-3306 Direct Phone
(713) 222-3291 Direct Fax
constance.rhebergen@bracewellgiuliani.com